

**ABSTRACT**

Reverse osmosis sea water desalination system,  
which comprises a reverse osmosis membrane, a boost pump  
5 and a feed device for distributing the water supplied by  
the pump and using the pressure of the water rejected by  
the membrane, wherein the feed device (2) comprises two  
hydraulic cylinders (7) and (8), each consisting of two  
jacketed cylinders (71, 72) and (81, 82), respectively  
10 that face one another and are each fastened to  
intermediate bodies (73) and (83) respectively, with two  
separate chambers (74, 75) and (84, 85), the pistons  
(76, 77) and (86, 87) of which are connected by common  
rods (78) and (88) respectively, a central  
15 interconnection body (9) that is fastened to the  
intermediate bodies (73, 83), which have a number of  
internal pipes that enter the chambers (74, 75, 84, 85)  
and enter pipes that (12) communicate with the front  
(7a, 7b, 8a, 8b) and rear (7c, 7d, 8c, 8d) cavities and  
20 a number of sliding pieces (10) and (11) that are housed  
in the chambers (74, 75, 84, 85) and can move between  
two end positions.

REVERSE OSMOSIS SEA WATER DESALINATION SYSTEM

This system comprises: a reverse osmosis membrane, a boost pump and a feed device for distributing the pressurised water supplied by the pump and using  
5 the pressure of the water rejected by the osmosis membrane. The feed device comprises: a first hydraulic cylinder (7) and a second hydraulic cylinder connected to one another by a central interconnection body (9) that establishes different connections between the hydraulic cylinders according to the position of a number of sliding pieces that are housed in the first and second hydraulic  
10 cylinder and which move along the rods (78, 88) of the cylinders (71, 72) (81, 82) of said hydraulic cylinders.